

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION  
GODDARD SPACE FLIGHT CENTER

I recommend that NASA, Goddard Space Flight Center, Wallops Flight Facility purchase a brand name product.

1. The product use and features that meets the minimum needs are as follows:
  - Blonder Tongue HDMI to QAM Modulators (HDE-2H-QAM)
    - HDE-2H-QAM (HD Encoder – 2xHDMI/YPbPr – QAM) accepts & auto-detects up to two (2) input streams in unencrypted HDMI & YPbPr (Component) formats. The encoder, when applicable, digitizes & MPEG-2 encodes each input into a high definition stream (HD-1080i/720p), and then multiplexes the resulting two (2) streams into one (1) output in QAM format in the 5.75-864 MHz range (CATV channels T7-T14 and 2-135). Any combination of input multiplexing is allowed, for example, 2x HDMI, or (1xHDMI)+(1xYPbPr). The encoder supports Dolby Digital AC-3 encoding & Closed Captioning, and is equipped with an EAS (Emergency Alert System) interface & an ancillary ASI output port. A front-panel RF test point allows for monitoring/testing of the QAM output without service interruption. Comprehensive remote monitoring and control is accomplished using any standard Web browser via a front-panel 10/100BaseT Ethernet connection.
  - Blonder Tongue Rack Mount 1Ghz 30dB Amp (RMDA-1000-30)
    - The RMDA-ARP (active return path) are rack mounted 2-way broadband distribution amplifiers. Utilizing push-pull hybrid amplifier technology, they are ideal for MATV, SMATV or CATV applications. The amplifiers have a forward bandwidth of 54 - 860 MHz with a gain of 30 dB. The reverse path of 5-40 MHz is field configurable for active or passive operation. The RMDA-ARP amplifier has built-in variable gain controls on both the forward and reverse paths. A forward path variable slope control is provided inter-stage as is the variable gain control. Additionally, a fixed forward equalizer and forward and reverse attenuator plug-ins can be installed for further signal conditioning at the input to the amplifier. 30 dB back-matched test ports at the input and output are provided for monitoring both forward and reverse signal levels without interrupting service. The amplifier is housed in a 1RU aluminum chassis that provides exceptional heat dissipation.

- Blonder Tongue 24 Port Rack Mount Splitter (DFCS-24)
  - The Blonder Tongue DFCS 24/32 are 5-1000 MHz passive rack mounted splitters with 24 or 32 broadband output ports. The DFCS 24/32 features high isolation between ports and low insertion loss. A -20 dB test port on the front panel permits testing without removing the unit from service. Two or more units may be used to provide the required number of output ports based upon system requirements. The DFCS 24/32 are compact, 1 3/4" high units designed for mounting in a standard 19" EIA rack.

2. Actions take to identify products which might the needs are as follows:

- Market Research
  - Vendor and Product analysis and comparison
  - Cost Comparison
  - Site Acceptance and Compatibility testing
- Products and vendors considered:
    - ChannelPlus HD QAM Encoder Modulator
    - ZeeVee Zvpro 250 Professional HD Encoder QAM Modulator
    - ZeeVee ZvPro 280 Combination HD Encoder/QAM Modulator
    - ZeeVee ZvBox 170 Combination 720p HD Encoder/QAM Modulator
    - ZeeVee HDbridge - Modular HD Encoder / QAM Modulator
    - Hauppauge WinTV HVR-1600 - ATSC HDTV / QAM
    - MaxCom HDSOI - (SMPTE292M) to Agile QAM Inserter

3. Factors to support the conclusion that the requirement is specific to a brand name:

- Digital cable television distribution of high-definition multimedia interface (HDMI) requires quadrature amplitude modulation (QAM).
- what other products or vendors lacked:
    - Unencrypted support
    - Uncompressed support
    - Any combination of input multiplexing
    - Dolby Digital AC-3 encoding
    - Closed Captioning

- RF test point allows for monitoring/testing of the QAM output without service interruption
- Remote monitoring and control
- Standard Web browser interface
- 10/100BaseT Ethernet connection
- Limited features by other vendors:
  - Single input only
  - Coax only transport
  - MPEG2 only support
  - Not SMPTE compliant

This recommendation is made pursuant to FAR 13.106, for the acquisition of supplies or services determined to be reasonably available from only from limited sources offering the specified brand name. Based on the above, it is concluded that our minimum needs are only reasonably available from the selected brand name.

Jim Acha No3  
Signature & Title      Engineer

8-23-2011  
Date

I hereby accept the above stated recommendation and determine that the circumstances of the contract action deem only a brand name product is reasonably available.

Therese L. Patterson  
Contracting Officer

8-24-11  
Date